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537989

**REMOVAL PROGRAM  
CHRONOLOGICAL SUMMARY REPORT  
FOR THE  
WORUMBO MILL SITE  
LISBON FALLS, MAINE  
17 SEPTEMBER 2003**

Prepared For:

U.S. Environmental Protection Agency  
Region I  
Emergency Planning and Response Branch  
1 Congress Street, Suite 1100  
Boston, MA 02114-2023

CONTRACT NO. 68-W-00-097

TDD NO. 03-08-0009

TASK NO. 6374

DC NO. R-2401

Submitted By:

Weston Solutions, Inc.  
Region I  
Superfund Technical Assessment and Response Team 2000 (START)  
37 Upton Drive  
Wilmington, MA 01887

January 2004

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## I. Narrative Chronology

## **Narrative Chronology**

### **Introduction**

The Worumbo Mill site (the site) is comprised of two properties located at 1 and 5 Canal Street in Lisbon Falls, Androscoggin County, Maine. Geographic coordinates of the site are latitude 43° 59' 41" north and longitude 70° 03' 39" west, as measured from the approximate center of the site [see Appendix A - Site Location Map (Figure 1)]. The properties are identified as Lot Nos. 13 and 14 on Lisbon Town Map U-5. The site is the location of an active textile mill, a textile outlet shop, a two-story maintenance/warehouse facility, and a hydroelectric power station. The site is bordered to the north and east by industrial and commercial properties, and to the south and west by the Androscoggin River [see Appendix B - Sample Location Diagram (Figure 2)].

### **Site History**

The Worumbo Mill parcel located at 1 Canal Street currently contains an active textile mill owned by Miller Industries, Inc. (Miller) and operated by Beiderlack of America Corporation (Beiderlack). The 5 Canal Street parcel was the site of a former textile mill owned by Miller which was damaged by fire on 23 July 1987, and was subsequently demolished. Currently, there are three structures remaining on the 5 Canal Street property, including a textile outlet store, a hydroelectric power station, and a structure referred to by Miller as Building 14. Building 14 was formerly used for manufacturing, but is now used as a warehouse and maintenance facility. During the process of evaluating hazardous waste generator closure at other sites owned by Miller, the Maine Department of Environmental Protection (ME DEP) identified issues that must be addressed before clean closure could be certified. Miller subsequently retained the services of environmental consultant Sevee & Maher Engineering, Inc. (SMEI).

In April 2002, approximately 215 drums and containers of hazardous materials from various Miller properties were consolidated and staged in Building 14. The drums and containers were sampled, overpacked, and transported to appropriate disposal facilities during November 2002. SMEI conducted an investigation into the floor drains within Building 14, and the drains were subsequently cleaned of hazardous materials. Currently, Building 14 is used for storage, and a portion of the basement is used as a machine shop for the hydroelectric power station. Contaminants identified at this site and other properties owned by Miller include asbestos-containing materials (ACM), polychlorinated biphenyls (PCBs), lead paint, metals-containing dye powders and liquids, mercury-containing fluorescent lights, and various chemicals used in textile production including metals, acids, and volatile organic compounds (VOCs). Future plans for the site by Miller include obtaining compliant hazardous waste generator closure.

### **Site Activities**

On 27 August 2003, Weston Solutions, Inc. Superfund Technical Assessment and Response Team (START) members Mandy Butterworth, Paul Callahan, and Bill Mahany; and U. S. Environmental Protection Agency (EPA) On-Scene Coordinators (OSCs) Wing Chau and Catherine Young mobilized to the site and met ME DEP representative Andy Slusarski and SMEI representative Guy Cote for the purpose of conducting a site reconnaissance. START personnel established a support zone, and calibrated the air monitoring instruments, which included a photoionization detector (PID), a flame ionization detector (FID), a combustible gas indicator/oxygen meter (CGI/O<sub>2</sub>), and a radiation meter (MicroR). Ambient conditions were documented in the site health and safety plan

(HASP) as follows: PID = 0.0 units; FID = 0.0 units; oxygen ( $O_2$ ) = 21%; lower explosive limit (LEL) = 0%; and MicroR = 12 microroentgens per hour ( $\mu R/hr$ ). The HASP was prepared as a separate document, entitled *Removal Program Site Health and Safety Plan for the Worumbo Mill Preliminary Assessment/Site Investigation, Lisbon Falls, Maine*.

An exterior and interior walk-through of the property was conducted by all site personnel. Building 14 was observed to contain boxed product on the first floor. The basement contained additional storage and a machine shop for the hydroelectric power station. The floor drain in the basement of Building 14 was observed to be packed with a poly-backed sorbent roll, and metal grates were laid over the top of the drain. No drums were visible. It was observed that the property surrounding the site buildings was either paved or predominantly clear of vegetation. Other structures on the site include a textile outlet store, the Worumbo Mill building, and a small brick structure used by Miller as office space. A portion of the 5 Canal Street parcel is used as a parking area for the outlet store and office building.

### **Sampling Activities**

On 17 September 2003, OSC Chau and START members Butterworth, John Burton, Kyle Brennan, and Abbey Spargo mobilized to the site to conduct sampling activities. EPA and START personnel were met on site by SMEI representative Matt Muzzy. OSC Chau and START member Butterworth conducted an exterior walk-through of the site and selected 10 soil sampling stations, labeled SS-01 through SS-10. Soil sample locations were marked with pin flags, which were removed from the property at the conclusion of sampling activities.

START personnel donned appropriate personal protective equipment (PPE), as detailed in the site HASP, and began collecting soil samples. Grab soil samples were collected using stainless steel scoops, for semivolatile organic compound (SVOC), pesticide/polychlorinated biphenyl (pest/PCB), and Target Analyte List (TAL) metals analyses. Grab soil samples for volatile organic compound (VOC) analysis were collected using disposable polyethylene syringes. Non-dedicated sampling equipment was decontaminated between each sample station. All sampling activities were conducted in accordance with the site sampling quality assurance/quality control (QA/QC) plan, which has been prepared as a separate document, entitled *Removal Program Sampling Quality Assurance/Quality Control Plan for the Worumbo Mill Preliminary Assessment/Site Investigation, Lisbon Falls, Maine*. Descriptions of samples collected are presented in Table 1.

**TABLE 1**  
**Sample Descriptions**

Station No. and EPA Sample No.	Sample Type and Matrix	Grab or Composite	Sample Depth (Inches)	Geographic Coordinates	Comments
SS-01 D11610	Soil	Grab	0 - 3	43° 59' 39.36" N 70° 03' 35.76" W	
SS-02 D11611	Soil	Grab	0 - 3	43° 59' 39.42" N 70° 03' 36.64" W	

**TABLE 1**  
**Sample Descriptions (Concluded)**

Station No. and EPA Sample No.	Sample Type and Matrix	Grab or Composite	Sample Depth (Inches)	Geographic Coordinates	Comments
SS-03 D11612	Soil	Grab	0 - 3	43° 59' 39.75" N 70° 03' 37.14" W	
SS-04 D11613	Soil	Grab	0 - 3	43° 59' 40.10" N 70° 03' 37.47" W	
SS-05 D11614	Soil	Grab	0 - 3	43° 59' 39.60" N 70° 03' 37.58" W	MS/MSD/Dup
SS-06 D11615	Soil	Grab	0 - 3	43° 59' 38.83" N 70° 03' 37.37" W	
SS-07 D11616	Soil	Grab	0 - 3	43° 59' 41.42" N 70° 03' 38.01" W	
SS-08 D11617	Soil	Grab	0 - 3	43° 59' 42.00" N 70° 03' 38.92" W	
SS-09 D11618	Soil	Grab	0 - 3	43° 59' 41.32" N 70° 03' 39.09" W	
SS-10 D11619	Soil	Grab	0 - 3	43° 59' 40.93" N 70° 03' 40.31" W	

MS/MSD/Dup - matrix spike/matrix spike duplicate/duplicate.

N = North

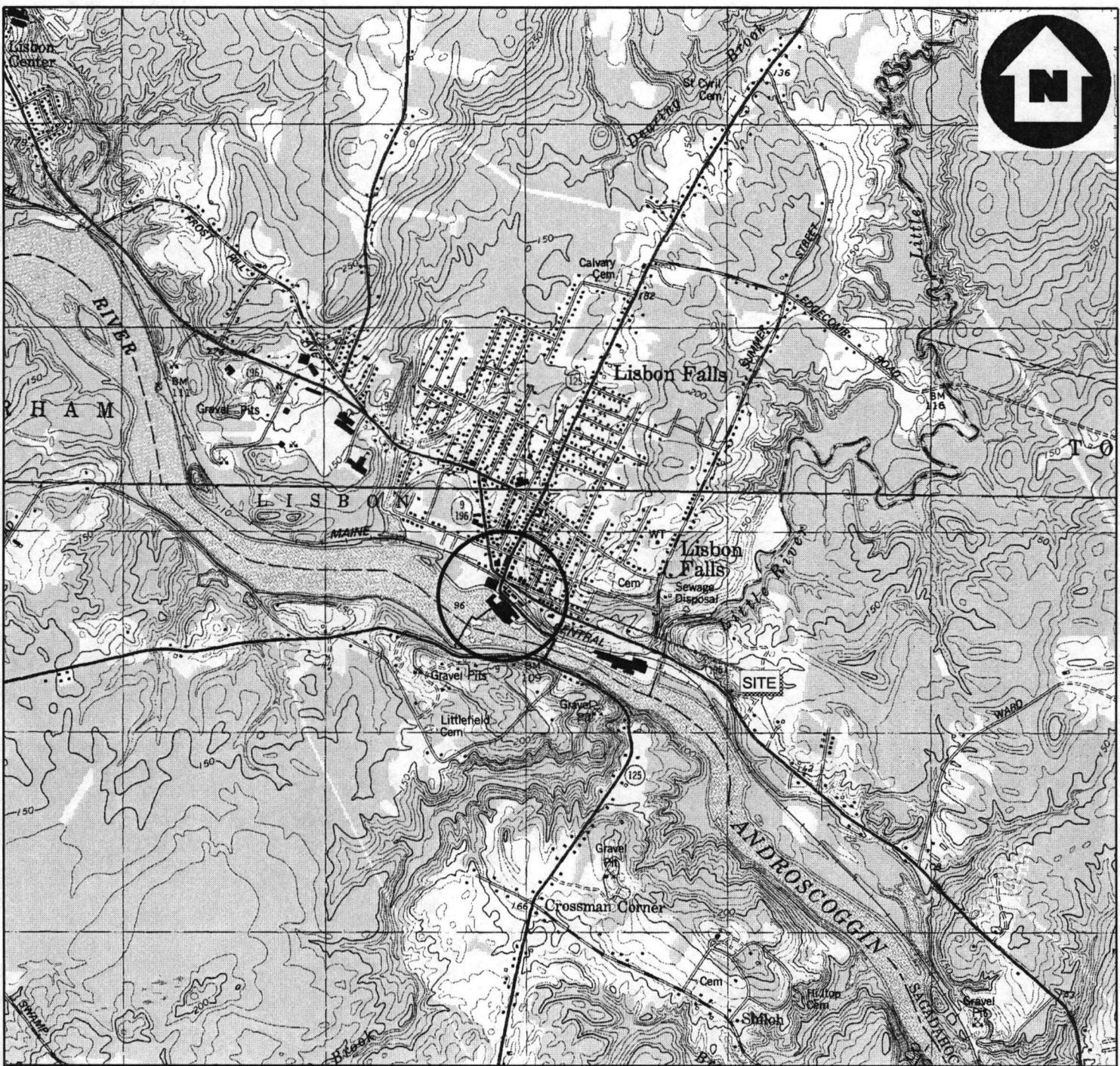
W = West

Upon completion of sampling activities, the geographic coordinates of each sampling location were recorded using a Trimble Pathfinder Global Positioning System (GPS) unit, and sample locations/site conditions were photodocumented (see Appendix C - Photodocumentation Log). START personnel labeled and packaged the samples, placed the sample containers in a cooler with ice, loaded the vehicles, and departed the site.

On 18 September 2003, START personnel completed chain-of-custody paperwork, and shipped the samples via Federal Express to their respective laboratories (see Appendix D - Chain-of-Custody Record). Samples to be analyzed for organic parameters were sent to Laucks Testing Laboratories, Inc., located in Seattle, Washington, and samples to be analyzed for inorganic parameters were sent to Sentinel, Inc., located in Huntsville, Alabama (see Appendix E - Analytical Data).

## II. Appendices

**Appendix A**  
**Site Location Map (Figure 1)**



BASE MAP IS A PORTION OF THE FOLLOWING 7.5' SERIES U.S.G.S. QUADRANGLE(S):

LISBON FALLS NORTH AND LISBON FALLS SOUTH, 1994.

1 0 1 Miles

0 Feet



QUADRANGLE LOCATION

## SITE LOCATION MAP

WORUMBO MILL SITE  
1 AND 5 CANAL STREET  
LISBON FALLS, MAINE

**WESTON**  
SOLUTIONS  
Restoring Resource Efficiency

REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD #	DRAWN BY:	DATE:
03-08-0009	E. ACKERMAN	01/02/2004
FILE NAME:	E:\VARC_APRESSTART2\WORUMBOFIG1.APR	
	FIGURE 1	

Appendix B  
Sample Location Diagram (Figure 2)



### SAMPLE LOCATION DIAGRAM

WORUMBO MILL  
1 AND 5 CANAL STREET  
LISBON FALLS, MAINE

**WESTON**  
SOLUTIONS  
Restoring Resource Efficiency

REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD NUMBER: 03-08-0009	CREATED BY: D. MUZRALL	CREATED ON: 11/18/2003
FILE LOCATION: E:\ARC_APRS\START2\MILLERMAINESITES.APR	FIGURE 2	

**Appendix C**  
**Photodocumentation Log**

**PHOTOGRAPHY LOG SHEET**  
**Worumbo Mill Site • Lisbon Falls, Maine**

TOP



**SCENE:** View of sample location SS-08, located northwest of Building 14. Photograph taken facing north.

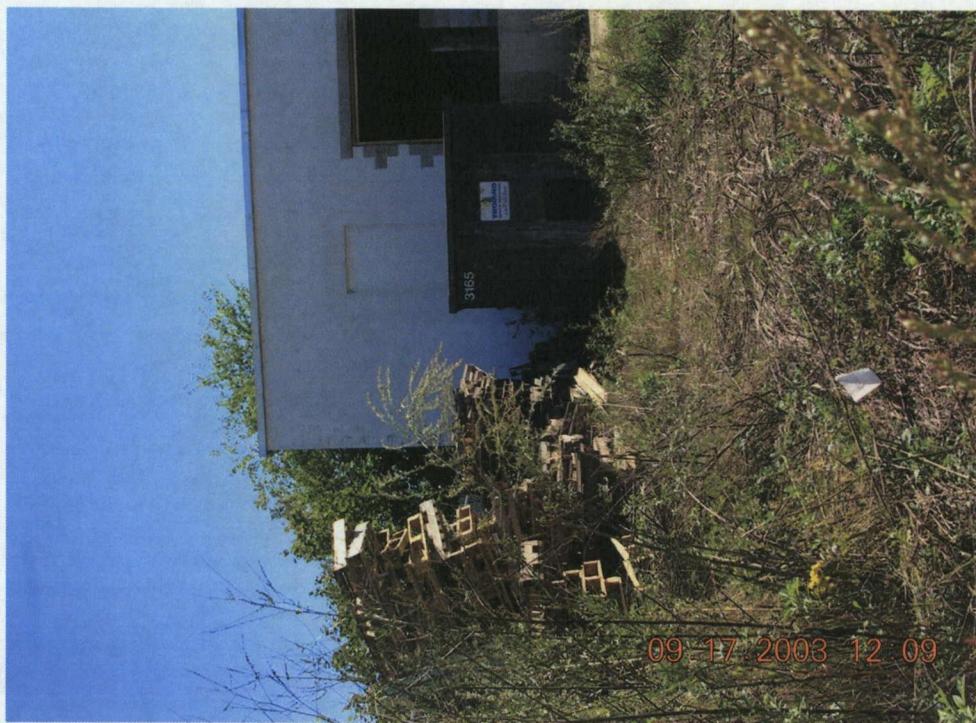
**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** John Burton

**TIME:** 12:08 hours

**CAMERA:** Nikon CoolPix 3100

TOP



**SCENE:** View of sample location SS-07, located northwest of Building 14. Photograph taken facing southeast.

**DATE:** 17 September 2003

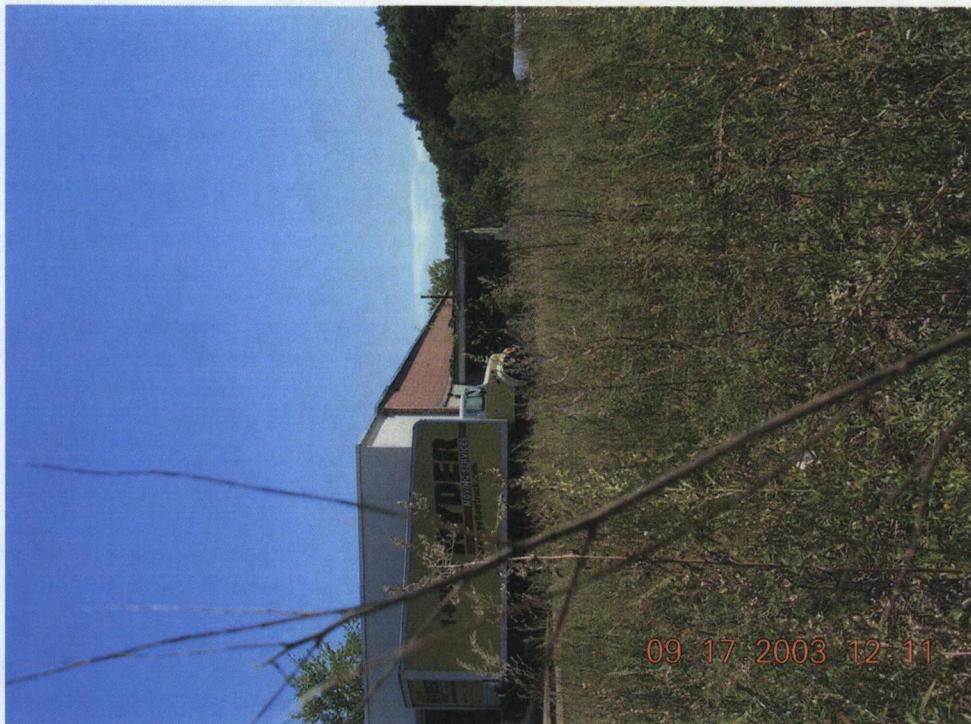
**PHOTOGRAPHY BY:** John Burton

**TIME:** 12:09 hours

**CAMERA:** Nikon CoolPix 3100

**PHOTOGRAPHY LOG SHEET**  
**Worumbo Mill Site • Lisbon Falls, Maine**

**TOP**



**SCENE:** View of sample location SS-09, located west of Building 14. Photograph taken facing east.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** John Burton

**TIME:** 12:11 hours

**CAMERA:** Nikon CoolPix 3100



**SCENE:** View of sample locations SS-07 and SS-08, located along the northeast perimeter of the 5 Canal Street parcel. Photograph taken facing east.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:36 hours

**CAMERA:** Nikon CoolPix 3100

**PHOTOGRAPHY LOG SHEET**  
**Worumbo Mill Site • Lisbon Falls, Maine**



**SCENE:** View of sample location SS-09, located west of Building 14. Photograph taken facing east.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:37 hours

**CAMERA:** Nikon CoolPix 3100



**SCENE:** View of sample location SS-08, located along the northeast perimeter of the 5 Canal Street parcel. Photograph taken facing east.

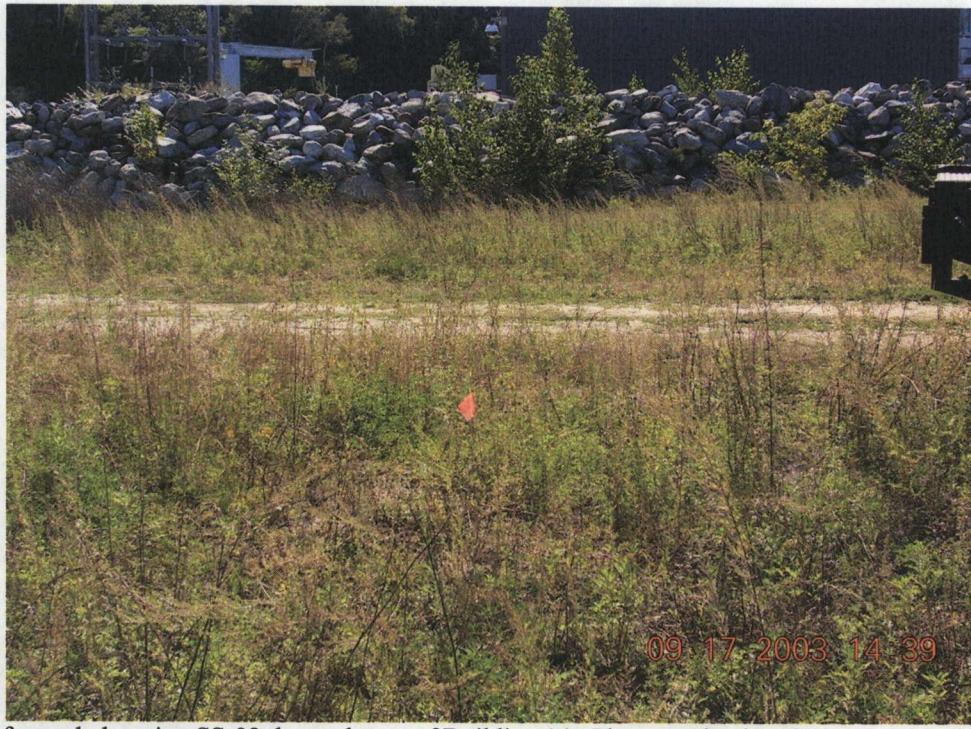
**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:38 hours

**CAMERA:** Nikon CoolPix 3100

**PHOTOGRAPHY LOG SHEET**  
**Worumbo Mill Site • Lisbon Falls, Maine**



**SCENE:** View of sample location SS-09, located west of Building 14. Photograph taken facing southwest.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:39 hours

**CAMERA:** Nikon CoolPix 3100



**SCENE:** View of sample location SS-10, located along the perimeter of the hydroelectric power station. Photograph taken facing southwest.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:39 hours

**CAMERA:** Nikon CoolPix 3100

**PHOTOGRAPHY LOG SHEET**  
**Worumbo Mill Site • Lisbon Falls, Maine**



**SCENE:** View of sample location SS-06, located along the southern perimeter of the 5 Canal Street parcel. Photograph taken facing east.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:41 hours

**CAMERA:** Nikon CoolPix 3100



**SCENE:** View of sample location SS-01, located east of Building 14. Photograph taken facing northeast.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:42 hours

**CAMERA:** Nikon CoolPix 3100

**PHOTOGRAPHY LOG SHEET**  
**Worumbo Mill Site • Lisbon Falls, Maine**



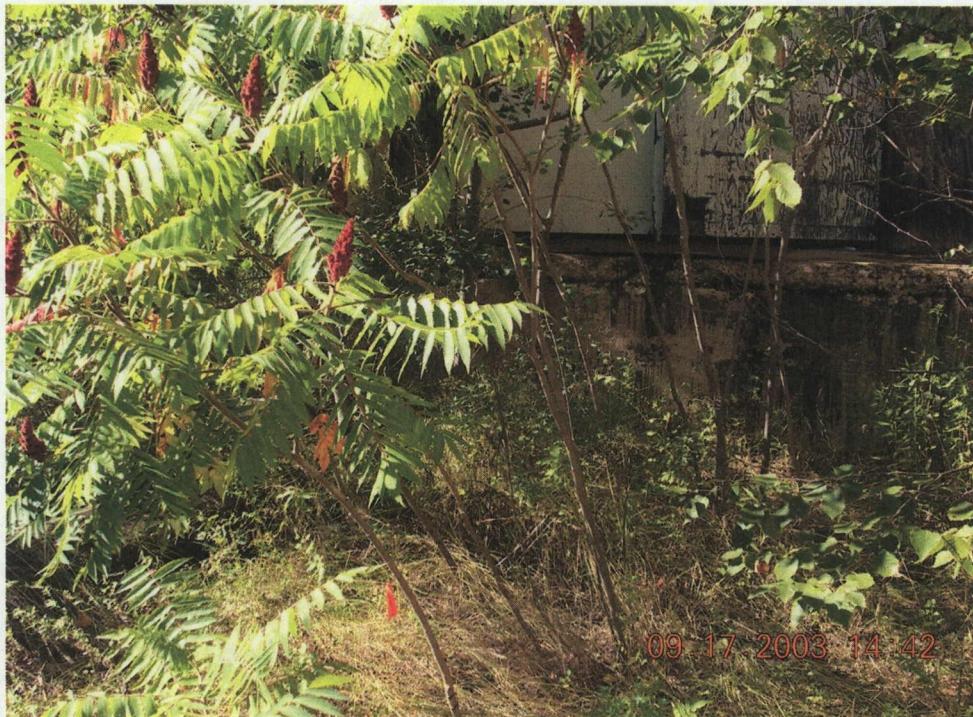
**SCENE:** View of sample locations SS-02 (foreground), SS-03 (background right), and SS-05 (background left), located southwest of Building 14. Photograph taken facing northwest.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:42 hours

**CAMERA:** Nikon CoolPix 3100



**SCENE:** View of sample location SS-04, located southwest of Building 14. Photograph taken facing northwest.

**DATE:** 17 September 2003

**PHOTOGRAPHY BY:** Abbey Spargo

**TIME:** 14:42 hours

**CAMERA:** Nikon CoolPix 3100

**Appendix D**  
**Chain-of-Custody Record**



**WESTON Solutions, Inc START Region 1**  
**Generic Chain of Custody**

**Reference Case**

Client No: 0626F

SDG No:

<b>Date Shipped:</b> 9/18/2003 <b>Carrier Name:</b> FedEx <b>Airbill:</b> 838392260094 <b>Shipped to:</b> Laucks Testing Laboratories, Inc. 940 South Harney Street Seattle WA 98108 (206) 767-5060	<b>Chain of Custody Record</b>		Sampler Signature:		<b>For Lab Use Only</b>	
	<b>Relinquished By</b>	(Date / Time)	<b>Received By</b>	(Date / Time)	<b>Lab Contract No:</b>	
	1				<b>Unit Price:</b>	
	2				<b>Transfer To:</b>	
	3				<b>Lab Contract No:</b>	
	4				<b>Unit Price:</b>	

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
D11610	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	204 (Ice Only), 205 (Ice Only), 207 (CH3OH) (3)	SS-01	S: 9/17/2003 11:20	
D11611	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	208 (Ice Only), 209 (Ice Only), 211 (CH3OH) (3)	SS-02	S: 9/17/2003 11:25	
D11612	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	212 (Ice Only), 213 (Ice Only), 215 (CH3OH) (3)	SS-03	S: 9/17/2003 11:22	
D11613	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	216 (Ice Only), 217 (Ice Only), 219 (CH3OH) (3)	SS-04	S: 9/17/2003 11:30	
D11614	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	220 (Ice Only), 221 (Ice Only), 223 (CH3OH) (3)	SS-05	S: 9/17/2003 11:45	
D11615	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	224 (Ice Only), 225 (Ice Only), 227 (CH3OH) (3)	SS-06	S: 9/17/2003 11:43	
D11616	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	228 (Ice Only), 229 (Ice Only), 231 (CH3OH) (3)	SS-07	S: 9/17/2003 11:40	
D11617	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	232 (Ice Only), 233 (Ice Only), 235 (CH3OH) (3)	SS-08	S: 9/17/2003 11:58	
D11618	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	236 (Ice Only), 237 (Ice Only), 239 (CH3OH) (3)	SS-09	S: 9/17/2003 11:55	
D11619	Soil (0"-3")		pest/PCB (14), SVOCs (14) VOC (14)	240 (Ice Only), 241 (Ice Only), 243 (CH3OH) (3)	SS-10	S: 9/17/2003 11:48	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:  D11614	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High  pest/PCB = pest/PCB, SVOCs = SVOC, VOC = VOC	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? _____	Shipment Iced? _____

**TR Number: 1-360078695-091803-0003**

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
 Send Copy to: SHAW E & I, 88C Elm Street, Hopkinton, Massachusetts, 02072-4705  
 Phone 508-479-0876 Fax 508-261-1448

**LABORATORY COPY**



**WESTON Solutions, Inc START Region 1**  
**Generic Chain of Custody**

**Reference Case**

Client No: 0626F

SDG No:

<b>Date Shipped:</b> 9/18/2003 <b>Carrier Name:</b> FedEx <b>Airbill:</b> 838392260094 <b>Shipped to:</b> Laucks Testing Laboratories, Inc. 940 South Harney Street Seattle WA 98108 (206) 767-5060	<b>Chain of Custody Record</b>		Sampler Signature:		<b>For Lab Use Only</b>	
	Relinquished By	(Date / Time)	Received By	(Date / Time)	Lab Contract No:	
	1				Unit Price:	
	2				Transfer To:	
	3				Lab Contract No:	
	4				Unit Price:	

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
D11620	PE Water		VOC (14)	681 (CH3OH) (1)	PE-01	S: 9/17/2003 12:00	
D11621	PE Water		SVOCs (14)	683 (Ice Only) (1)	PE-02	S: 9/17/2003 12:00	
D11622	PE Water		pest/PCB (14)	680 (Ice Only) (1)	PE-03	S: 9/17/2003 12:00	
D11623	PE Soil		pest/PCB (14)	684 (Ice Only) (1)	PE-04	S: 9/17/2003 12:00	
D11819	Field QC		VOC (14)	706 (CH3OH) (1)	TB-01	S: 9/17/2003 12:00	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:  D11614	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High  pest/PCB = pest/PCB, SVOCs = SVOC, VOC = VOC	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? _____	Shipment Iced? _____

**TR Number: 1-360078695-091803-0003**

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
 Send Copy to: SHAW E & I, 88C Elm Street, Hopkinton, Massachusetts, 02072-4705  
 Phone 508-479-0876 Fax 508-261-1448

**LABORATORY COPY**



**WESTON Solutions, Inc START Region 1**  
**Generic Chain of Custody**

**Reference Case**

Client No: 0618F

SDG No:

<b>Date Shipped:</b> 9/18/2003 <b>Carrier Name:</b> FedEx <b>Airbill:</b> 837122718225 <b>Shipped to:</b> Sentinel Inc. 116 Washington Street, NE Huntsville AL 35801 (256) 534-9800	<b>Chain of Custody Record</b>		Sampler Signature:		<b>For Lab Use Only</b>	
	<b>Relinquished By</b>	(Date / Time)	<b>Received By</b>	(Date / Time)	<b>Lab Contract No:</b>	
	1				<b>Unit Price:</b>	
	2				<b>Transfer To:</b>	
	3				<b>Lab Contract No:</b>	
	4				<b>Unit Price:</b>	

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
D11610	Soil (0"-3")		TALMet (14)	206 (Ice Only) (1)	SS-01	S: 9/17/2003	11:20	
D11611	Soil (0"-3")		TALMet (14)	210 (Ice Only) (1)	SS-02	S: 9/17/2003	11:25	
D11612	Soil (0"-3")		TALMet (14)	214 (Ice Only) (1)	SS-03	S: 9/17/2003	11:22	
D11613	Soil (0"-3")		TALMet (14)	218 (Ice Only) (1)	SS-04	S: 9/17/2003	11:30	
D11614	Soil (0"-3")		TALMet (14)	222 (Ice Only) (1)	SS-05	S: 9/17/2003	11:45	
D11615	Soil (0"-3")		TALMet (14)	226 (Ice Only) (1)	SS-06	S: 9/17/2003	11:43	
D11616	Soil (0"-3")		TALMet (14)	230 (Ice Only) (1)	SS-07	S: 9/17/2003	11:40	
D11617	Soil (0"-3")		TALMet (14)	234 (Ice Only) (1)	SS-08	S: 9/17/2003	11:58	
D11618	Soil (0"-3")		TALMet (14)	238 (Ice Only) (1)	SS-09	S: 9/17/2003	11:55	
D11619	Soil (0"-3")		TALMet (14)	242 (Ice Only) (1)	SS-10	S: 9/17/2003	11:48	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:  D11614	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:  TALMet = TAL Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>

**TR Number: 1-245588227-092403-0010**

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
 Send Copy to: SHAW E & I, 88C Elm Street, Hopkinton, Massachusetts, 02072-4705  
 Phone 508-479-0876 Fax 508-261-1448

**LABORATORY COPY**



**WESTON Solutions, Inc START Region 1**  
**Generic Chain of Custody**

Date Shipped:	9/18/2003	<b>Chain of Custody Record</b>		Sampler Signature:		
Carrier Name:	FedEx	Relinquished By (Date / Time)		Received By (Date / Time)		
Airbill:	837122718225	1				
Shipped to:	Sentinel Inc. 116 Washington Street, NE Huntsville AL 35801 (256) 534-9800	2				
		3				
		4				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
D11624	PE Soil		TALMet (14)	682 (Ice Only) (1)	PE-05	S: 9/17/2003 12:00	

**Reference Case**

Client No: 0618F

SDG No:

L

**For Lab Use Only**

Lab Contract No:

\_\_\_\_\_

Unit Price:

\_\_\_\_\_

Transfer To:

\_\_\_\_\_

Lab Contract No:

\_\_\_\_\_

Unit Price:

\_\_\_\_\_

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:  D11614	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
Analysis Key:  TALMet = TAL Metals	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? _____	Shipment Iced? _____

**TR Number: 1-245588227-092403-0010**

PR provides preliminary results. Requests for preliminary results will increase analytical costs.  
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Phone 508-479-0876 Fax 508-261-1448

**LABORATORY COPY**

F2V5.1.046 Page 2 of 2

**Appendix E**  
**Analytical Data**

**SITE: WORUMBO MILL  
CASE: 0626F SDG: D11610  
LABORATORY: LAUCKS TESTING LABORATORIES**

**TABLE 1**  
**VOLATILE SOIL ANALYSES - MEDIUM LEVEL**  
 $\mu\text{g}/\text{kg}$

SAMPLE NUMBER: SAMPLE LOCATION: LABORATORY NUMBER:	D11610 SS-01 0309268-01	D11611 SS-02 0309268-02	D11612 SS-03 0309268-03	D11613 SS-04 0309268-04	D11614 SS-05 0309268-05
COMPOUND	CRQL				
Dichlorodifluoromethane	1200	1200 U	1200 U	1200 U	1200 U
Chloromethane	1200	1200 U	1200 U	1200 U	1200 U
Vinyl Chloride	1200	1200 U	1200 U	1200 U	1200 U
Bromomethane	1200	1200 U	1200 U	1200 U	1200 U
Chloroethane	1200	1200 U	1200 U	1200 U	1200 U
Trichlorofluoromethane	1200	1200 U	1200 U	1200 U	1200 U
1,1-Dichloroethene	1200	1200 U	1200 U	1200 U	1200 U
1,1,2-Trichloro-1,2,2-trifluoroethane	1200	1200 U	1200 U	1200 U	1200 U
Acetone	1200	1200 U	1200 U	1200 U	1200 U
Carbon Disulfide	1200	1200 U	1200 U	1200 U	1200 U
Methyl Acetate	1200	46 J	1200 U	1200 U	59 J
Methylene Chloride	1200	1200 U	1200 U	1200 U	1200 U
trans-1,2-Dichloroethene	1200	1200 U	1200 U	1200 U	1200 U
Methyl tert-Butyl Ether	1200	1200 U	1200 U	1200 U	1200 U
1,1-Dichloroethane	1200	1200 U	1200 U	1200 U	1200 U
cis-1,2-Dichloroethene	1200	1200 U	1200 U	1200 U	1200 U
2-Butanone	1200	1200 U	1200 U	1200 U	1200 U
Chloroform	1200	1200 U	1200 U	1200 U	1200 U
1,1,1-Trichloroethane	1200	1200 U	1200 U	1200 U	1200 U
Cyclohexane	1200	1200 U	1200 U	1200 U	1200 U
Carbon Tetrachloride	1200	1200 U	1200 U	1200 U	1200 U
Benzene	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dichloroethane	1200	1200 U	1200 U	1200 U	1200 U
Trichloroethene	1200	1200 U	1200 U	1200 U	1200 U
Methylcyclohexane	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dichloropropane	1200	1200 U	1200 U	1200 U	1200 U
Bromodichloromethane	1200	1200 U	1200 U	1200 U	1200 U
cis-1,3-Dichloropropene	1200	1200 U	1200 U	1200 U	1200 U
4-Methyl-2-Pentanone	1200	1200 U	1200 U	1200 U	1200 U
Toluene	1200	1200 U	1200 U	1200 U	1200 U
trans-1,3-Dichloropropene	1200	1200 U	1200 U	1200 U	1200 U
1,1,2-Trichloroethane	1200	1200 U	1200 U	1200 U	1200 U
Tetrachloroethene	1200	1200 U	1200 U	1200 U	1200 U
2-Hexanone	1200	1200 U	1200 U	1200 U	1200 U
Dibromochloromethane	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dibromoethane	1200	1200 U	1200 U	1200 U	1200 U
Chlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
Ethylbenzene	1200	1200 U	1200 U	1200 U	1200 U
Xylene (Total)	1200	1200 U	1200 U	1200 U	1200 U
Styrene	1200	1200 U	1200 U	1200 U	1200 U
Bromoform	1200	1200 U	1200 U	1200 U	1200 U
Isopropylbenzene	1200	1200 U	1200 U	1200 U	1200 U
1,1,2,2-Tetrachloroethane	1200	1200 U	1200 U	1200 U	1200 U
1,3-Dichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
1,4-Dichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dibromo-3-chloropropane	1200	1200 U	1200 U	1200 U	1200 U
1,2,4-Trichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0
DATE SAMPLED:	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03
DATE ANALYZED:	09/20/03	09/20/03	09/20/03	09/20/03	09/20/03
% MOISTURE:	7	10	11	7	7

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

**SITE: WORUMBO MILL**  
• **CASE: 0626F SDG: D11610**  
**LABORATORY: LAUCKS TESTING LABORATORIES**

**TABLE 1**  
**VOLATILE SOIL ANALYSES - MEDIUM LEVEL**  
**µg/kg**

SAMPLE NUMBER:	D11615	D11616	D11617	D11618	D11619
SAMPLE LOCATION:	SS-06	SS-07	SS-08	SS-09	SS-10
LABORATORY NUMBER:	0309268-06	0309268-07	0309268-08	0309268-09	0309268-10
COMPOUND	CRQL				
Dichlorodifluoromethane	1200	1200 U	1200 U	1200 U	1200 U
Chloromethane	1200	1200 U	1200 U	1200 U	1200 U
Vinyl Chloride	1200	1200 U	1200 U	1200 U	1200 U
Bromomethane	1200	1200 U	1200 U	1200 U	1200 U
Chloroethane	1200	1200 U	1200 U	1200 U	1200 U
Trichlorofluoromethane	1200	1200 U	1200 U	1200 U	1200 U
1,1-Dichloroethene	1200	1200 U	1200 U	1200 U	1200 U
1,1,2-Trichloro-1,2,2-trifluoroethane	1200	1200 U	1200 U	1200 U	1200 U
Acetone	1200	1200 U	1200 U	1200 U	1200 U
Carbon Disulfide	1200	1200 U	1200 U	1200 U	1200 U
Methyl Acetate	1200	60 J	1200 U	1200 U	46 J
Methylene Chloride	1200	1200 U	1200 U	1200 U	1200 U
trans-1,2-Dichloroethene	1200	1200 U	1200 U	1200 U	1200 U
Methyl tert-Butyl Ether	1200	1200 U	1200 U	1200 U	1200 U
1,1-Dichloroethane	1200	1200 U	1200 U	1200 U	1200 U
cis-1,2-Dichloroethene	1200	1200 U	1200 U	1200 U	1200 U
2-Butanone	1200	1200 U	1200 U	1200 U	1200 U
Chloroform	1200	1200 U	1200 U	1200 U	1200 U
1,1,1-Trichloroethane	1200	1200 U	1200 U	1200 U	1200 U
Cyclohexane	1200	1200 U	1200 U	1200 U	1200 U
Carbon Tetrachloride	1200	1200 U	1200 U	1200 U	1200 U
Benzene	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dichloroethane	1200	1200 U	1200 U	1200 U	1200 U
Trichloroethene	1200	1200 U	1200 U	1200 U	56 J
Methylcyclohexane	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dichloropropane	1200	1200 U	1200 U	1200 U	1200 U
Bromodichloromethane	1200	1200 U	1200 U	1200 U	1200 U
cis-1,3-Dichloropropene	1200	1200 U	1200 U	1200 U	1200 U
4-Methyl-2-Pentanone	1200	1200 U	1200 U	1200 U	1200 U
Toluene	1200	1200 U	1200 U	1200 U	1200 U
trans-1,3-Dichloropropene	1200	1200 U	1200 U	1200 U	1200 U
1,1,2-Trichloroethane	1200	1200 U	1200 U	1200 U	1200 U
Tetrachloroethene	1200	1200 U	1200 U	1200 U	1200 U
2-Hexanone	1200	1200 U	1200 U	1200 U	1200 U
Dibromochloromethane	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dibromoethane	1200	1200 U	1200 U	1200 U	1200 U
Chlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
Ethylbenzene	1200	1200 U	1200 U	1200 U	1200 U
Xylene (Total)	1200	1200 U	1200 U	1200 U	1200 U
Styrene	1200	1200 U	1200 U	1200 U	1200 U
Bromoform	1200	1200 U	1200 U	1200 U	1200 U
Isopropylbenzene	1200	1200 U	1200 U	1200 U	1200 U
1,1,2,2-Tetrachloroethane	1200	1200 U	1200 U	1200 U	1200 U
1,3-Dichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
1,4-Dichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
1,2-Dibromo-3-chloropropane	1200	1200 U	1200 U	1200 U	1200 U
1,2,4-Trichlorobenzene	1200	1200 U	1200 U	1200 U	1200 U
DILUTION FACTOR:	1.0	1.0	1.0	1.0	1.0
DATE SAMPLED:	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03
DATE ANALYZED:	09/20/03	09/20/03	09/20/03	09/20/03	09/20/03
% MOISTURE:	11	8	11	8	9

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: WORUMBO MILL  
 • CASE: 0626F SDG: D11610  
 LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 1  
 VOLATILE SOIL ANALYSES - MEDIUM LEVEL  
 µg/kg

SAMPLE NUMBER:	D11819
SAMPLE LOCATION:	TB-01
LABORATORY NUMBER:	0309268-15
COMPOUND	CRQL
Dichlorodifluoromethane	1200 1200 U
Chloromethane	1200 1200 U
Vinyl Chloride	1200 1200 U
Bromomethane	1200 1200 U
Chloroethane	1200 1200 U
Trichlorofluoromethane	1200 1200 U
1,1-Dichloroethene	1200 1200 U
1,1,2-Trichloro-1,2,2-trifluoroethane	1200 1200 U
Acetone	1200 1200 U
Carbon Disulfide	1200 1200 U
Methyl Acetate	1200 1200 U
Methylene Chloride	1200 1200 U
trans-1,2-Dichloroethene	1200 1200 U
Methyl tert-Butyl Ether	1200 1200 U
1,1-Dichloroethane	1200 1200 U
cis-1,2-Dichloroethene	1200 1200 U
2-Butanone	1200 420 J
Chloroform	1200 1200 U
1,1,1-Trichloroethane	1200 1200 U
Cyclohexane	1200 1200 U
Carbon Tetrachloride	1200 1200 U
Benzene	1200 1200 U
1,2-Dichloroethane	1200 1200 U
Trichloroethene	1200 1200 U
Methylcyclohexane	1200 1200 U
1,2-Dichloropropane	1200 1200 U
Bromodichloromethane	1200 1200 U
cis-1,3-Dichloropropene	1200 1200 U
4-Methyl-2-Pentanone	1200 1200 U
Toluene	1200 1200 U
trans-1,3-Dichloropropene	1200 1200 U
1,1,2-Trichloroethane	1200 1200 U
Tetrachloroethene	1200 1200 U
2-Hexanone	1200 1200 U
Dibromochloromethane	1200 1200 U
1,2-Dibromoethane	1200 1200 U
Chlorobenzene	1200 1200 U
Ethylbenzene	1200 1200 U
Xylene (Total)	1200 1200 U
Styrene	1200 1200 U
Bromoform	1200 1200 U
Isopropylbenzene	1200 1200 U
1,1,2,2-Tetrachloroethane	1200 1200 U
1,3-Dichlorobenzene	1200 1200 U
1,4-Dichlorobenzene	1200 1200 U
1,2-Dichlorobenzene	1200 1200 U
1,2-Dibromo-3-chloropropane	1200 1200 U
1,2,4-Trichlorobenzene	1200 1200 U
DILUTION FACTOR:	1.0
DATE SAMPLED:	09/17/03
DATE ANALYZED:	09/20/03
% MOISTURE:	NA

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: WORUMBO MILL  
CASE: 0626F SDG: D11610  
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 2  
SEMOVOLATILE SOIL ANALYSES  
μg/kg

	SAMPLE NUMBER: SAMPLE LOCATION: LABORATORY NUMBER:	D11610 SS-01 0309268-01	D11611 SS-02 0309268-02	D11612 SS-03 0309268-03	D11613 SS-04 0309268-04	D11614 SS-05 0309268-05	D11615 SS-06 0309268-06
COMPOUND	CRQL						
Benzaldehyde	330	350 U	51 J	370 U	350 U	350 U	39 J
Phenol	330	350 U	360 U	370 U	350 U	350 U	370 U
bis(2-Chloroethyl)Ether	330	350 U	360 U	370 U	350 U	350 U	370 U
2-Chlorophenol	330	350 U	360 U	370 U	350 U	350 U	370 U
2-Methylphenol	330	350 U	360 U	370 U	350 U	350 U	370 U
2,2'-oxybis(1-Chloropropane)	330	350 U	360 U	370 U	350 U	350 U	370 U
Acetophenone	330	47 J	360 U	370 U	350 U	350 U	370 U
4-Methylphenol	330	350 U	360 U	370 U	350 U	350 U	370 U
N-Nitroso-di-n-propylamine	330	350 U	360 U	370 U	350 U	350 U	370 U
Hexachloroethane	330	350 U	360 U	370 U	350 U	350 U	370 U
Nitrobenzene	330	350 U	360 U	370 U	350 U	350 U	370 U
Isophorone	330	350 U	360 U	370 U	350 U	350 U	370 U
2-Nitrophenol	330	350 U	360 U	370 U	350 U	350 U	370 U
2,4-Dimethylphenol	330	350 U	360 U	370 U	350 U	350 U	370 U
bis(2-Chloroethoxy)methane	330	350 U	360 U	370 U	350 U	350 U	370 U
2,4-Dichlorophenol	330	350 U	360 U	370 U	350 U	350 U	370 U
Naphthalene	330	350 U	45 J	42 J	41 J	350 U	370 U
4-Chloroaniline	330	350 U	360 U	370 U	350 U	350 U	370 U
Hexachlorobutadiene	330	350 U	360 U	370 U	350 U	350 U	370 U
Caprolactam	330	350 U	360 U	370 U	350 U	350 U	370 U
4-Chloro-3-methylphenol	330	350 U	360 U	370 U	350 U	350 U	370 U
2-Methylnaphthalene	330	43 J	46 J	370 U	44 J	350 U	370 U
Hexachlorocyclopentadiene	330	350 U	360 U	370 U	350 U	350 U	370 U
2,4,6-Trichlorophenol	330	350 U	360 U	370 U	350 U	350 U	370 U
2,4,5-Trichlorophenol	830	890 U	910 U	930 U	890 U	890 U	930 U
1,1'-Biphenyl	330	350 U	360 U	370 U	38 J	350 U	370 U
2-Chloronaphthalene	330	350 U	360 U	370 U	350 U	350 U	370 U
2-Nitroaniline	830	890 U	910 U	930 U	890 U	890 U	930 U
Dimethylphthalate	330	350 U	360 U	370 U	350 U	350 U	370 U
2,6-Dinitrotoluene	330	350 U	360 U	370 U	350 U	350 U	370 U
Acenaphthylene	330	350 U	360 U	370 U	350 U	350 U	370 U
3-Nitroaniline	830	890 U	910 U	930 U	890 U	890 U	930 U
Acenaphthene	330	130 J	250 J	370 U	58 J	350 U	48 J
2,4-Dinitrophenol	830	890 U	910 U	930 U	890 U	890 U	930 U
4-Nitrophenol	830	890 U	910 U	930 U	890 U	890 U	930 U
Dibenzofuran	330	77 J	120 J	370 U	39 J	350 U	370 U
2,4-Dinitrotoluene	330	350 U	360 U	370 U	350 U	350 U	370 U
Diethylphthalate	330	350 U	360 U	370 U	350 U	350 U	370 U
Fluorene	330	130 J	230 J	370 U	58 J	350 U	50 J
4-Chlorophenyl-phenylether	330	350 U	360 U	370 U	350 U	350 U	370 U
4-Nitroaniline	830	890 U	910 U	930 U	890 U	890 U	930 U
4,6-Dinitro-2-methylphenol	830	890 U	910 U	930 U	890 U	890 U	930 U
N-Nitrosodiphenylamine (1)	330	350 U	360 U	370 U	350 U	350 U	370 U
4-Bromophenyl-phenylether	330	350 U	360 U	370 U	350 U	350 U	370 U
Hexachlorobenzene	330	350 U	360 U	370 U	350 U	350 U	370 U
Atrazine	330	350 U	360 U	370 U	350 U	350 U	370 U
Pentachlorophenol	830	890 U	910 U	930 U	890 U	890 U	930 U
Phenanthrene	330	1400	2200	440	670	190 J	490
Anthracene	330	280 J	580	99 J	150 J	45 J	110 J
Carbazole	330	240 J	400	48 J	90 J	350 U	44 J
Di-n-butylphthalate	330	350 U	360 U	370 U	350 U	350 U	370 U
Fluoranthene	330	2000	*4300	790	1200	390	700
Pyrene	330	2100	*4200	720	1400	360	530
Butylbenzylphthalate	330	350 U	360 U	370 U	350 U	350 U	370 U
3,3'-Dichlorobenzidine	330	350 U	360 U	370 U	350 U	350 U	370 U
Benzo(a)anthracene	330	1100	2600	480	740	210 J	330 J
Chrysene	330	1200	2500	510	800	210 J	340 J
bis(2-Ethylhexyl)phthalate	330	350 U	440 U	370 U	430 U	350 U	370 U
Di-n-octylphthalate	330	350 U	360 U	370 U	350 U	350 U	370 U
Benzo(b)fluoranthene	330	1400	2900	650	930	290 J	350 J
Benzo(k)fluoranthene	330	810	1900	320 J	560	120 J	190 J
Benzo(a)pyrene	330	960	2100	460	630	200 J	260 J
Indeno(1,2,3-cd)pyrene	330	440	1000	240 J	310 J	100 J	110 J
Dibenzo(a,h)anthracene	330	150 J	390	86 J	110 J	350 U	40 J
Benzo(g,h,i)perylene	330	460	1100	270 J	320 J	120 J	100 J

DILUTION FACTOR:	1.0	1.0/2.0*	1.0	1.0	1.0	1.0
DATE SAMPLED:	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03
DATE EXTRACTED:	09/22/03	09/22/03	09/22/03	09/22/03	09/22/03	09/22/03
DATE ANALYZED:	09/24/03	09/24/03	09/24/03	09/24/03	09/24/03	09/24/03
% MOISTURE:	7	9	11	7	7	11

\* - Result reported from diluted analysis.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: WORUMBO MILL  
CASE: 0626F SDG: D11610  
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 2  
SEMICVOLATILE SOIL ANALYSES  
μg/kg

	SAMPLE NUMBER: SAMPLE LOCATION: LABORATORY NUMBER:	D11616 SS-07 0309268-07	D11617 SS-08 0309268-08	D11618 SS-09 0309268-09	D11619 SS-10 0309268-10
COMPOUND	CRQL				
Benzaldehyde	330	360 U	370 U	360 U	38 J
Phenol	330	360 U	370 U	360 U	360 U
bis(2-Chloroethyl)Ether	330	360 U	370 U	360 U	360 U
2-Chlorophenol	330	360 U	370 U	360 U	360 U
2-Methylphenol	230	360 U	370 U	360 U	360 U
2,2'-oxybis(1-Chloropropane)	330	360 U	370 U	360 U	360 U
Acetophenone	330	360 U	370 U	360 U	360 U
4-Methylphenol	330	360 U	370 U	360 U	360 U
N-Nitroso-di-n-propylamine	330	360 U	370 U	360 U	360 U
Hexachloroethane	330	360 U	370 U	360 U	360 U
Nitrobenzene	330	360 U	370 U	360 U	360 U
Isophorone	330	360 U	370 U	360 U	360 U
2-Nitrophenol	330	360 U	370 U	360 U	360 U
2,4-Dimethylphenol	330	360 U	370 U	360 U	360 U
bis(2-Chloroethoxy)methane	330	360 U	370 U	360 U	360 U
2,4-Dichlorophenol	330	360 U	370 U	360 U	360 U
Naphthalene	330	360 U	370 U	54 J	57 J
4-Chloroaniline	330	360 U	370 U	360 U	360 U
Hexachlorobutadiene	330	360 U	370 U	360 U	360 U
Caprolactam	330	360 U	370 U	360 U	360 U
4-Chloro-3-methylphenol	330	360 U	370 U	360 U	360 U
2-Methylnaphthalene	330	360 U	370 U	360 U	360 U
Hexachlorocyclopentadiene	330	360 U	370 U	360 U	360 U
2,4,6-Trichlorophenol	330	360 U	370 U	360 U	360 U
2,4,5-Trichlorophenol	830	900 U	930 U	900 U	910 U
1,1'-Biphenyl	330	360 U	370 U	360 U	360 U
2-Chloronaphthalene	330	360 U	370 U	360 U	360 U
2-Nitroaniline	830	900 U	930 U	900 U	910 U
Dimethylphthalate	330	360 U	370 U	360 U	360 U
2,6-Dinitrotoluene	330	360 U	370 U	360 U	360 U
Acenaphthylene	330	360 U	370 U	110 J	360 U
3-Nitroaniline	830	900 U	930 U	900 U	910 U
Acenaphthene	330	360 U	370 U	51 J	140 J
2,4-Dinitrophenol	830	900 U	930 U	900 U	910 U
4-Nitrophenol	830	900 U	930 U	900 U	910 U
Dibenzofuran	330	360 U	370 U	43 J	84 J
2,4-Dinitrotoluene	330	360 U	370 U	360 U	360 U
Diethylphthalate	330	360 U	370 U	360 U	360 U
Fluorene	330	360 U	370 U	57 J	140 J
4-Chlorophenyl-phenylether	330	360 U	370 U	360 U	360 U
4-Nitroaniline	830	900 U	930 U	900 U	910 U
4,6-Dinitro-2-methylphenol	830	900 U	930 U	900 U	910 U
N-Nitrosodiphenylamine (1)	330	360 U	370 U	360 U	360 U
4-Bromophenyl-phenylether	330	360 U	370 U	360 U	360 U
Hexachlorobenzene	330	360 U	370 U	360 U	360 U
Atrazine	330	360 U	370 U	360 U	360 U
Pentachlorophenol	830	900 U	930 U	900 U	910 U
Phenanthrene	330	38 J	53 J	620	1200
Anthracene	330	360 U	370 U	190 J	340 J
Carbazole	330	360 U	370 U	70 J	150 J
Di-n-butylphthalate	330	360 U	370 U	360 U	360 U
Fluoranthene	330	75 J	110 J	1200	1700
Pyrene	330	61 J	86 J	1300	1600
Butylbenzylphthalate	330	360 U	370 U	360 U	360 U
3,3'-Dichlorobenzidine	330	360 U	370 U	360 U	360 U
Benzo(a)anthracene	330	42 J	52 J	770	850
Chrysene	330	42 J	60 J	710	770
bis(2-Ethylhexyl)phthalate	330	360 U	370 U	360 U	360 U
Di-n-octylphthalate	330	360 U	370 U	360 U	360 U
Benzo(b)fluoranthene	330	41 J	73 J	930	930
Benzo(k)fluoranthene	330	360 U	370 U	550	480
Benzo(a)pyrene	330	360 U	47 J	700	720
Indeno(1,2,3-cd)pyrene	330	360 U	370 U	330 J	310 J
Dibenza(a,h)anthracene	330	360 U	370 U	100 J	96 J
Benzo(g,h,i)perylene	330	360 U	370 U	350 J	330 J
DILUTION FACTOR:		1.0	1.0	1.0	1.0
DATE SAMPLED:	09/17/03	09/17/03	09/17/03	09/17/03	
DATE EXTRACTED:	09/22/03	09/22/03	09/22/03	09/22/03	
DATE ANALYZED:	09/24/03	09/24/03	09/24/03	09/24/03	
% MOISTURE:	8	11	8	9	

\* - Result reported from diluted analysis.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: WORUMBO MILL  
CASE: 0626F SDG: D11610  
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 3  
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES  
μg/kg

SAMPLE NUMBER:	D11610	D11611	D11612	D11613	D11614	D11615
SAMPLE LOCATION:	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06
LABORATORY NUMBER:	0309268-01	0309268-02	0309268-03	0309268-04	0309268-05	0309268-06
COMPOUND	CRQL					
alpha-BHC	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U
beta-BHC	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U
delta-BHC	1.7	1.8 U	1.9 U	1.9 U	R	1.8 U
gamma-BHC (Lindane)	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U
Heptachlor	1.7	2.2	2.0 J	4.8	2.4 J	1.8 U
Aldrin	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U
Heptachlor Epoxide	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U
Endosulfan I	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.9 U
Dieldrin	3.3	3.5 U	3.7 U	12 J	11 J	3.5 U
4,4'-DDE	3.3	3.5 U	3.7 U	3.7 U	3.5 U	3.5 U
Endrin	3.3	3.5 U	3.7 U	3.7 U	3.5 U	3.5 U
Endosulfan II	3.3	3.5 U	3.7 U	3.7 U	3.5 U	3.5 U
4,4'-DDD	3.3	3.5 U	3.7 U	3.7 U	3.5 U	3.5 U
Endosulfan Sulfate	3.3	3.5 U	3.7 U	3.7 U	3.5 U	3.5 U
4,4'-DDT	3.3	3.5 U	3.7 U	3.7 U	3.5 U	3.5 U
Methoxychlor	17	23	37	21	23	18 U
Endrin Ketone	3.3	5.2 J	11	7.3	7.0	2.0 J
Endrin Aldehyde	3.3	3.5 U	3.7 U	3.7 U	3.5 U	3.5 U
alpha-Chlordane	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U
gamma-Chlordane	1.7	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U
Toxaphene	170	180 U	190 U	190 U	180 U	180 U
Aroclor-1016	33	35 U	37 U	37 U	35 U	35 U
Aroclor-1221	67	72 U	74 U	75 U	72 U	72 U
Aroclor-1232	33	35 U	37 U	37 U	35 U	35 U
Aroclor-1242	33	35 U	37 U	37 U	35 U	35 U
Aroclor-1248	33	35 U	37 U	37 U	35 U	35 U
Aroclor-1254	33	35 U	37 U	37 U	35 U	35 U
Aroclor-1260	33	35 U	37 U	37 U	35 U	35 U
DILUTION FACTOR:		1.0	1.0	1.0	1.0	1.0
DATE SAMPLED:	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03
DATE EXTRACTED:	09/23/03	09/23/03	09/23/03	09/23/03	09/23/03	09/23/03
DATE ANALYZED:	09/26/03	09/26/03	09/26/03	09/26/03	09/27/03	09/27/03
% MOISTURE:	7	10	11	7	7	11

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: WORUMBO MILL  
CASE: 0626F SDG: D11610  
LABORATORY: LAUCKS TESTING LABORATORIES

TABLE 3  
PESTICIDE/POLYCHLORINATED BIPHENYL SOIL ANALYSES  
 $\mu\text{g}/\text{kg}$

SAMPLE NUMBER:	D11616	D11617	D11618	D11619
SAMPLE LOCATION:	SS-07	SS-08	SS-09	SS-10
LABORATORY NUMBER:	0309268-07	0309268-08	0309268-09	0309268-10
COMPOUND				
alpha-BHC	1.7	1.8 U	1.9 U	1.8 U
beta-BHC	1.7	1.8 U	1.9 U	1.8 U
delta-BHC	1.7	R	1.9 U	1.8 U
gamma-BHC (Lindane)	1.7	1.8 U	1.9 U	1.8 U
Heptachlor	1.7	1.8 U	1.9 U	1.4 J
Aldrin	1.7	1.8 U	1.9 U	1.8 U
Heptachlor Epoxide	1.7	1.8 U	1.9 U	1.8 U
Endosulfan I	1.7	1.8 U	1.9 U	1.8 U
Dieldrin	3.3	3.6 U	3.7 U	3.6 U
4,4'-DDE	3.3	3.6 U	3.7 U	3.6 U
Endrin	3.3	3.6 U	3.7 U	R
Endosulfan II	3.3	3.6 U	3.7 U	3.6 U
4,4'-DDD	3.3	3.6 U	3.7 U	3.6 U
Endosulfan Sulfate	3.3	3.6 U	3.7 U	3.6 U
4,4'-DDT	3.3	3.6 U	3.7 U	3.6 U
Methoxychlor	17	18 U	19 U	22 J
Endrin Ketone	3.3	3.6 U	3.7 U	9.3 J
Endrin Aldehyde	3.3	3.6 U	3.7 U	3.6 U
alpha-Chlordane	1.7	1.8 U	1.9 U	1.8 U
gamma-Chlordane	1.7	1.8 U	1.9 U	1.8 U
Toxaphene	170	180 U	190 U	180 U
Aroclor-1016	33	36 U	37 U	36 U
Aroclor-1221	67	73 U	75 U	73 U
Aroclor-1232	33	36 U	37 U	36 U
Aroclor-1242	33	36 U	37 U	36 U
Aroclor-1248	33	36 U	37 U	36 U
Aroclor-1254	33	36 U	37 U	36 U
Aroclor-1260	33	36 U	37 U	260 J
DILUTION FACTOR:		1.0	1.0	1.0
DATE SAMPLED:	09/17/03	09/17/03	09/17/03	09/17/03
DATE EXTRACTED:	09/23/03	09/23/03	09/23/03	09/23/03
DATE ANALYZED:	09/27/03	09/27/03	09/27/03	09/27/03
% MOISTURE:	8	11	8	9

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: WORUMBO MILL  
CASE: 0618F SDG: D11610  
LABORATORY: SENTINEL, INC.

TABLE 1  
INORGANIC SOIL ANALYSES  
NON-VALIDATED DATA  
mg/kg

SAMPLE NUMBER:	D11610	D11611	D11612	D11613	D11614	D11615	D11616
SAMPLE LOCATION:	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07
LABORATORY NUMBER:	51418	51419	51420	51421	51422	51423	51424
PERCENT SOLIDS:	91.6	91.7	89.0	92.8	93.3	87.5	91.4

INORGANIC ANALYTES	METHOD	INSTRUMENT DETECTION LIMITS (mg/kg)						CONTRACT DETECTION LIMITS (mg/kg)			
		P	8.5	8840	6290	6100	4870	6450	8990	5590	40
ALUMINUM	P	1.0	1.1 UJ	1.1 UJ	1.1 UJ	1.7 J	1.1 UJ	1.1 UJ	1.1 UJ	1.1 UJ	12
ANTIMONY	P	0.86	7.5 J	10.5 J	6.2 J	6.3 J	8.6 J	5.6 J	6.5 J	6.5 J	2
ARSENIC	P	0.34	59.4	43.8	54.3	45.3	36.1	37.1	21.7	21.7	40
BARIUM	P	0.04	0.08 J	0.13	0.29	0.14	0.15	0.21	0.17	0.17	1
BERYLLIUM	P	0.16	0.17 U	0.17 U	0.18 U	0.88	0.17 U	0.18 U	0.18 U	0.18 U	1
CADMIUM	P	97.7	2270	2180	2170	1910	2280	1690	2000	2000	1000
CALCIUM	P	0.24	35.9	23.2	16.8	75.2	20.4	20.2	12.7	12.7	2
CHROMIUM	P	0.28	7.9	5.8	5.1	4.5	5.7	6.3	4.7	4.7	10
COBALT	P	0.32	14.8	14.4	15.6	14.5	13.3	9.2	7.4	7.4	5
COPPER	P	5.3	13500	11300	7720	10200	9200	11000	7750	7750	20
IRON	P	0.50	17.7 J	81.9 J	69.0 J	51.7 J	15.3 J	9.8 J	4.8 J	4.8 J	0.6
LEAD	P	7.2	4940	2990	1940	1830	2910	3190	2130	2130	1000
MAGNESIUM	P	0.32	199	155	124	161	156	172	118	118	3
MANGANESE	P	0.05	0.06 U	0.06 U	0.07 J	0.05 U	0.05 U	0.06 U	0.06 U	0.06 U	0.1
MERCURY	CV	0.40	24.4	17.9	11.5	17.3	17.3	16.0	12.4	12.4	8
NICKEL	P	5.4	4360	2210	1240	1310	2150	2170	1830	1830	1000
POTASSIUM	P	0.64	0.70 U	0.74 J	0.72 U	0.69 U	0.69 U	0.73 U	0.70 U	0.70 U	1
SELENIUM	P	0.44	0.48 U	0.48 U	0.49 U	0.47 U	0.47 U	0.50 U	0.48 U	0.48 U	2
SILVER	P	89.7	282	253	225	221	273	249	283	283	1000
SODIUM	P	1.0	1.1 UJ	1.1 UJ	1.2 UJ	1.1 UJ	1.1 UJ	1.2 UJ	1.1 UJ	1.1 UJ	2
THALLIUM	P	0.28	29.9	24.3	17.5	26.7	25.7	20.6	12.2	12.2	10
VANADIUM	P	2.3	49.5	75.9	40.0	41.9	37.8	73.0	21.6	21.6	4

ANALYTICAL METHOD

P - ICP  
CV - COLD VAPOR

NOTE:

J = QUANTITATION IS ESTIMATED DUE TO LIMITATIONS IDENTIFIED IN THE QUALITY CONTROL REVIEW (DATA REVIEW).

U = VALUE IS NON-DETECTED.

UJ = VALUE IS NON-DETECTED AND DETECTION LIMIT IS ESTIMATED.

R = VALUE IS REJECTED.

NA = NOT ANALYZED.

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

SITE: WORUMBO MILL  
CASE: 0618F SDG: D11610  
LABORATORY: SENTINEL, INC.

TABLE 1  
INORGANIC SOIL ANALYSES  
NON-VALIDATED DATA  
mg/kg

SAMPLE NUMBER:	D11617	D11618	D11619
SAMPLE LOCATION:	SS-08	SS-09	SS-10
LABORATORY NUMBER:	51425	51426	51427
PERCENT SOLIDS:	90.2	90.4	90.9

INORGANIC ANALYTES	METHOD	INSTRUMENT DETECTION LIMITS (mg/kg)	D11617	D11618	D11619	CONTRACT DETECTION LIMITS (mg/kg)
ALUMINUM	P	8.5	6250	6800	8160	40
ANTIMONY	P	1.0	1.1 UJ	1.1 UJ	1.7 J	12
ARSENIC	P	0.86	7.2 J	22.5 J	8.8 J	2
BARIUM	P	0.34	24.5	49.0	108	40
BERYLLIUM	P	0.04	0.23	0.13	0.16	1
CADMIUM	P	0.16	0.18 U	0.18 U	0.18 U	1
CALCIUM	P	97.7	1670	3810	13500	1000
CHROMIUM	P	0.24	15.4	21.1	25.8	2
COBALT	P	0.28	5.2	8.2	6.9	10
COPPER	P	0.32	9.2	12.8	32.0	5
IRON	P	5.3	8550	9160	10500	20
LEAD	P	0.50	18.4 J	66.0 J	42.7 J	0.6
MAGNESIUM	P	7.2	2530	3030	4510	1000
MANGANESE	P	0.32	132	152	368	3
MERCURY	CV	0.05	0.06 U	0.06 U	0.06 U	0.1
NICKEL	P	0.40	14.8	20.8	51.7	8
POTASSIUM	P	5.4	1670	2540	3170	1000
SELENIUM	P	0.64	0.71 U	0.71 U	2.0	1
SILVER	P	0.44	0.49 U	0.49 U	0.48 U	2
SODIUM	P	89.7	262	258	372	1000
THALLIUM	P	1.0	1.2 U	1.2 U	1.1 U	2
VANADIUM	P	0.28	14.3	38.6	208	10
ZINC	P	2.3	25.4	56.3	86.9	4

ANALYTICAL METHOD

P - ICP  
CV - COLD VAPOR

NOTE:

J = QUANTITATION IS ESTIMATED DUE TO LIMITATIONS IDENTIFIED  
IN THE QUALITY CONTROL REVIEW (DATA REVIEW).  
U = VALUE IS NON-DETECTED.  
UJ = VALUE IS NON-DETECTED AND DETECTION LIMIT IS ESTIMATED.  
R = VALUE IS REJECTED.  
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NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.